

- 1.** A method comprising:
using a shared resource; and
refraining from contending for access to said shared resource for a backoff interval
after the last use of said shared resource;
wherein said backoff interval is based on at least one previous backoff interval that is
associated with at least one previous use of said shared resource.
- 2.** The method of claim 1 further comprising transmitting a frame using said shared
resource after said refraining, wherein said shared resource is a shared-communications
channel.
- 3.** The method of claim 1 further comprising powering down a receiver for at least a
portion of said backoff interval.
- 4.** The method of claim 1 wherein said backoff interval is further based on at least
one of:
i) a moving average; and
ii) a contention window value.
- 5.** The method of claim 1 wherein said backoff interval comprises a time interval
that is based on a random number.
- 6.** The method of claim 5 wherein said time interval can assume a nonzero value
only after an unsuccessful attempt to transmit occurs.
- 7.** The method of claim 1 wherein said backoff interval is constrained to be at least
as long as an IEEE 802.11 distributed interframe space.
- 8.** A method comprising:
using a shared resource; and
refraining from contending for access to said shared resource for a backoff interval
after the last use of said shared resource;
powering down a receiver for at least a portion of said backoff interval;
wherein said backoff interval is based on at least one previous backoff interval that is
associated with at least one previous use of said shared resource.

9. The method of claim 8 further comprising transmitting a frame using said shared resource after said refraining, wherein said shared resource is a shared-communications channel.

10. The method of claim 8 wherein said backoff interval is further based on at least one of:

- i) a moving average; and
- ii) a contention window value.

11. The method of claim 8 wherein said backoff interval comprises a time interval that is based on a random number.

12. The method of claim 11 wherein said time interval can assume a nonzero value only after an unsuccessful attempt to transmit occurs.

13. An apparatus comprising:

a transmitter for using a shared resource; and

a processor for refraining from contending for access to said shared resource for a backoff interval after the last use of said shared resource;

wherein said backoff interval is based on at least one previous backoff interval that is associated with at least one previous use of said shared resource.

14. The apparatus of claim 13 further comprising a receiver for powering down for at least a portion of said backoff interval.

15. The apparatus of claim 14 wherein said receiver is also for receiving a value representing said backoff interval.

16. The apparatus of claim 13 wherein said processor is also for determining said backoff interval.

17. The apparatus of claim 13 wherein said shared resource is a shared-communications channel and wherein said transmitter communicates over said shared-communications channel in accordance with an IEEE 802.11 protocol.

18. An apparatus comprising:

a host computer for directing a station to use a shared resource; and
said station for:

- (1) using said shared resource;

- (2) refraining from contending for access to said shared resource for a backoff interval after the last use of said shared resource; and
 - (3) powering down a receiver for at least a portion of said backoff interval;
- wherein said backoff interval is based on at least one previous backoff interval that is associated with at least one previous use of said shared resource.

19. The apparatus of claim 18 further comprising an access point for:

- (1) determining said backoff interval; and
- (2) distributing a value representing said backoff interval.

20. The apparatus of claim 19 wherein said station is also for receiving said value representing said backoff interval.

21. The apparatus of claim 18 wherein said backoff interval comprises a time interval that is based on a random number.